

Propeller

Abstract

The inventive propeller consists of a shaft comprising at least two hubs which are mounted thereon and provided with blades fixed to each of them. Each blade has a front and rear sharp edges and is embodied in such a way that the greater airfoil thickness thereof is equal to $(0.10-0.25)b$ along the blade span, wherein b is the mean chord of the blade. The greatest airfoil thickness of each blade is located in the middle of each mean chord and is twisted around an axis passing through the middles of the mean chords along the blade span. The blade can be fixed to each hub at an angle of $<90^\circ$ with respect to the radius thereof, thereby reducing a local aerodynamic drag and aerodynamic loads. The inventive propeller can be provided with a fixed cylindrical enclosure which embraces all blades and extended in front of the blades of the front hub at a distance which is equal to or greater than the blade span, thereby increasing a torque effect value.